

REMARKS

Applicants acknowledge receipt of the Office Action mailed February 27, 2009.

In the Office Action, the Examiner rejected claims 31-37, 39-48, 51, and 54-66 under 35 U.S.C. § 103(a) as being unpatentable over *Yamashita et al.* (JP Patent No. 58-4610) in view of *Miyazaki et al.* (U.S. Patent Pub. No. 2001/0037847), and optionally in view of *Pneumatiques* (GB Patent No. 1,091,507); rejected claims 31-35, 38-46, 49, 51, 54, 58, 59, and 63-66 under 35 U.S.C. § 103(a) as being unpatentable over *Yamashita* in view of *Ikehara* (U.S. Patent No. 5,584,169) and *Miyazaki*; and objected to claims 50, 52, and 53 as being dependent upon a rejected base claim but allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In this Amendment, Applicants amend claims 31, 33, 34, 44, 45, 54-57, 59, and 60; add new claims 67 and 68; and cancel claim 66, without prejudice or disclaimer. Upon entry of this Amendment, claims 31-65, 67, and 68 will be pending. Of these claims, claim 31 is independent.

The originally-filed specification, claims, abstract, and drawings fully support the amendments to claim 31, and the addition of new claims 67 and 68. No new matter has been introduced.

Applicants gratefully acknowledge the Examiner's indication of allowable subject matter in claims 50, 52, and 53. Applicants, however, have not rewritten claims 50, 52, and 53 to include all of the limitations of base claim 31 and any intervening claims because at least independent claim 31 is patentably distinguishable over the cited prior art.

Based on the foregoing amendments, Applicants traverse the rejections above and respectfully request reconsideration for at least the reasons that follow.

I. 35 U.S.C. § 103(a) REJECTIONS

Applicants traverse the rejection of claims 31-37, 39-48, 51, and 54-66 under 35 U.S.C. § 103(a) as being unpatentable over *Yamashita* in view of *Miyazaki*, and optionally in view of *Pneumatiques*. Applicants respectfully disagree with the Examiner's arguments and conclusions and submit that amended independent claim 31 patentably distinguishes over *Yamashita*, *Miyazaki*, and *Pneumatiques* at least for the reasons described below. Applicants further submit that the rejection of claim 66 has been rendered moot by the cancellation of that claim, without prejudice or disclaimer.

The key to supporting any rejection under 35 U.S.C. § 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. See M.P.E.P. § 2142, 8th Ed., Rev. 7 (July 2008). Such an analysis should be made explicit and cannot be premised upon mere conclusory statements. See *id.* "A conclusion of obviousness requires that the reference(s) relied upon be enabling in that it put the public in possession of the claimed invention." M.P.E.P. § 2145. Furthermore, "[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the results would have been predictable to one of ordinary skill in the art" at the time the invention was made. M.P.E.P. § 2143.01(III), internal citation omitted. Moreover, "[i]n determining the differences between the prior art and the claims, the question under 35 U.S.C. § 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole

would have been obvious.” M.P.E.P. § 2141.02(I), internal citations omitted (emphasis in original).

“[T]he framework for the objective analysis for determining obviousness under 35 U.S.C. 103 is stated in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966). . . . The factual inquiries . . . [include determining the scope and content of the prior art and] . . . [a]scertaining the differences between the claimed invention and the prior art.” M.P.E.P. § 2141(II). “Office personnel must explain why the difference(s) between the prior art and the claimed invention would have been obvious to one of ordinary skill in the art.” M.P.E.P. § 2141(III).

Independent claim 31 recites a pneumatic tyre, “wherein the first elongated reinforcing elements comprise greater than or equal to two metallic elements and less than or equal to five metallic elements, at least one of which is a preformed metallic element, each of the metallic elements having a diameter greater than or equal to 0.05 mm and less than or equal to 0.25 mm,” support for which may be found, for example, on page 21, line 32 - page 22, line 3 of Applicants’ specification.

Yamashita appears to disclose a radial tire including a bead section 3 and a bead filler 4, both of which are embedded in a sidewall 2. A flipper 5 made of reinforcing cords coats the bead section 3 and the bead filler 4. A bottom portion of a carcass layer 6 is folded outwards so that the bottom portion coats an outside surface of the flipper 5 and extends along the inner part of the carcass layer 6. (*Yamashita*, Abstract).

As admitted by the Examiner, “*Yamashita* . . . is completely silent with respect to the type of cord materials used in said flipper . . . ” (*Office Action*, p. 2, para. 3, ll. 7-8).

Yamashita also fails to teach or suggest at least a pneumatic tyre, “wherein the first

elongated reinforcing elements comprise greater than or equal to two metallic elements and less than or equal to five metallic elements, at least one of which is a preformed metallic element, each of the metallic elements having a diameter greater than or equal to 0.05 mm and less than or equal to 0.25 mm,” as recited in independent claim 31 (emphasis added).

In order to cure the deficiencies of *Yamashita*, the Examiner relies on *Miyazaki* and *Pneumatiques* and alleges “it is extremely well known to use the claimed metallic cords in the manufacture of bead reinforcing layers (one example of which is a flipper), as shown for example by Miyazaki . . . Miyazaki specifically teaches that the claimed metallic cord provides improved rubber penetration without a corresponding increase in diameter. *Pneumatiques* is optionally applied to evidence the specific use of metallic reinforcing cords . . . in tire flippers.” (*Office Action*, p. 2, para. 3, line 9 - p. 3, line 6). Such teachings, even if present in *Miyazaki* and *Pneumatiques*, which Applicants do not necessarily concede, however, do not constitute or suggest at least a pneumatic tyre, “wherein the first elongated reinforcing elements comprise greater than or equal to two metallic elements and less than or equal to five metallic elements, at least one of which is a preformed metallic element, each of the metallic elements having a diameter greater than or equal to 0.05 mm and less than or equal to 0.25 mm,” as recited in claim 31 (emphasis added).

Miyazaki, for example, discloses a pneumatic tire including a cord-reinforced layer such as a carcass, belt, or bead reinforcing layer, which is made of metallic cords. Each metallic cord is made up of six to twelve metallic filaments whose diameter is in a range of from 0.15 to 0.45 mm, the metallic filaments include waved filaments and

unwaved filaments (emphasis added). (*Miyazaki*, Abstract). Furthermore, specifically referring to the bead reinforcing cord, *Miyazaki* discloses that the metallic cord 10A for the bead reinforcing layer G is composed of seven to twelve metallic filaments F whose diameter (d) is in a range of from 0.17 to 0.25 mm (emphasis added). (*Miyazaki*, para. [0042]). *Miyazaki*, however, does not disclose “wherein the first elongated reinforcing elements comprise greater than or equal to two metallic elements and less than or equal to five metallic elements, at least one of which is a preformed metallic element, each of the metallic elements having a diameter greater than or equal to 0.05 mm and less than or equal to 0.25 mm” (emphasis added).

Similarly, *Pneumatiques* discloses a pneumatic tire including a bead with a single inextensible reinforcing bead wire 10 surmounted by a rubber filer 11, the assembly being partially enclosed by a flipper 12 constituted by parallel cords, cables or wires, preferably metal wires, embedded in a calendered layer of rubber mixture. (*Pneumatiques*, p. 2, ll. 35-41). *Pneumatiques*, however, fails to disclose the specific cord types used in the flipper, specifically, “wherein the first elongated reinforcing elements comprise greater than or equal to two metallic elements and less than or equal to five metallic elements, at least one of which is a preformed metallic element, each of the metallic elements having a diameter greater than or equal to 0.05 mm and less than or equal to 0.25 mm” (emphasis added).

The Applicants’ specification on page 6, line 19 - page 10, line 27, for example, discloses reasons why a fewer number of threadlike metallic elements, particularly, threadlike metallic elements of smaller diameter, give rise to unexpected and advantageous results. In particular, reinforcing elements having a low number of

threadlike metallic elements of small diameter result in a flexible flipper. Such a flexible flipper can be wound around the bead core and the bead filler without entrapping air/oxygen, as well as providing flexibility to the side portion of a tire, with advantageous results in terms of lateral grip of the overall tire. At the same time, the reinforcing threadlike metallic elements give the needed structural strength to the bead.

As explained above, the elements of independent claim 31 are neither taught nor suggested by the cited references. Consequently, the Office Action has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the prior art and the claim. Accordingly, no reason has been clearly articulated as to why the claim would have been obvious to one of ordinary skill in view of the prior art. Therefore, a *prima facie* case of obviousness has not been established for independent claim 31. Claim 31, and claims 32-37, 39-48, 51, and 54-65 which depend from claim 31, are patentable over *Yamashita*, *Miyazaki*, and *Pneumatiques*. Applicants therefore request that the rejection of claims 31-37, 39-48, 51, and 54-66 under 35 U.S.C. § 103(a) be withdrawn.

Applicants traverse the rejection of claims 31-35, 38-46, 49, 51, 54, 58, 59, and 63-66 under 35 U.S.C. § 103(a) as being unpatentable over *Yamashita* in view of *Ikehara* and *Miyazaki*. Applicants respectfully disagree with the Examiner's arguments and conclusions and submit that amended independent claim 31 patentably distinguishes over *Yamashita*, *Ikehara*, and *Miyazaki* at least for the reasons described below. Applicants further submit that the rejection of claim 66 has been rendered moot by the cancellation of that claim, without prejudice or disclaimer.

Independent claim 31 recites a pneumatic tyre, “wherein the first elongated reinforcing elements comprise greater than or equal to two metallic elements and less than or equal to five metallic elements, at least one of which is a preformed metallic element, each of the metallic elements having a diameter greater than or equal to 0.05 mm and less than or equal to 0.25 mm.”

As discussed above, *Yamashita* appears to disclose a radial tire including a bead section 3 and a bead filler 4, both of which are embedded in a sidewall 2. A flipper 5 made of reinforcing cords coats the bead section 3 and the bead filler 4. A bottom portion of a carcass layer 6 is folded outwards so that the bottom portion coats an outside surface of the flipper 5 and extends along the inner part of the carcass layer 6. (*Yamashita*, Abstract).

As admitted by the Examiner, “*Yamashita* . . . is completely silent with respect to the type of cord materials used in said flipper . . . ” (*Office Action*, p. 5, para. 4, ll. 7-8). *Yamashita* also fails to teach or suggest at least a pneumatic tyre, “wherein the first elongated reinforcing elements comprise greater than or equal to two metallic elements and less than or equal to five metallic elements, at least one of which is a preformed metallic element, each of the metallic elements having a diameter greater than or equal to 0.05 mm and less than or equal to 0.25 mm,” as recited in independent claim 31 (emphasis added).

In order to cure the deficiencies of *Yamashita*, the Examiner relies on *Ikehara* and *Miyazaki* and alleges “it is extremely well known to use the claimed metallic cords in the manufacture of bead reinforcing layers (one example of which is a flipper), as shown for example by *Ikehara* . . . More particularly, *Ikehara* teaches that such a metallic cord

provides improved corrosion resistance . . . Miyazaki is applied to further evidence the known use of similar cords having preformed filaments in belt plies and/or bead reinforcing layers . . . ” (*Office Action*, p. 5, para. 4, line 9 - p. 6, line 6). Such teachings, even if present in *Ikehara* and *Miyazaki*, however, do not constitute or suggest a pneumatic tyre, “wherein the first elongated reinforcing elements comprise greater than or equal to two metallic elements and less than or equal to five metallic elements, at least one of which is a preformed metallic element, each of the metallic elements having a diameter greater than or equal to 0.05 mm and less than or equal to 0.25 mm,” as recited in claim 31 (emphasis added).

Ikehara, for example, discloses a steel cord for reinforcing rubber articles, including one wave-form or helical core steel filament and a plurality of sheath steel filaments (ranging from 5-8 sheath steel filaments) disposed around the core steel filament, resulting in a steel cord including a total of 6-9 filaments (emphasis added). *Ikehara*, however, does not disclose “wherein the first elongated reinforcing elements comprise greater than or equal to two metallic elements and less than or equal to five metallic elements, at least one of which is a preformed metallic element, each of the metallic elements having a diameter greater than or equal to 0.05 mm and less than or equal to 0.25 mm” (emphasis added).

Furthermore, as discussed above, *Miyazaki*, for example, discloses a pneumatic tire including a cord-reinforced layer such as a carcass, belt, or bead reinforcing layer, which is made of metallic cords. Each metallic cord is made up of six to twelve metallic filaments whose diameter is in a range of from 0.15 to 0.45 mm, the metallic filaments include waved filaments and unwaved filaments (emphasis added). (*Miyazaki*,

Abstract). Additionally, specifically referring to the bead reinforcing cord, *Miyazaki* discloses that the metallic cord 10A for the bead reinforcing layer G is composed of seven to twelve metallic filaments F whose diameter (d) is in a range of from 0.17 to 0.25 mm (emphasis added). (*Miyazaki*, para. [0042]). *Miyazaki*, however, does not disclose “wherein the first elongated reinforcing elements comprise greater than or equal to two metallic elements and less than or equal to five metallic elements, at least one of which is a preformed metallic element, each of the metallic elements having a diameter greater than or equal to 0.05 mm and less than or equal to 0.25 mm.” (emphasis added).

As explained above, the elements of independent claim 31 are neither taught nor suggested by the cited references. Consequently, the Office Action has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the prior art and the claim. Accordingly, no reason has been clearly articulated as to why the claim would have been obvious to one of ordinary skill in view of the prior art. Therefore, a *prima facie* case of obviousness has not been established for independent claim 31. Claim 31, and claims 32-35, 38-46, 49, 51, 54, 58, 59, and 63-65 which depend from claim 31, are patentable over *Yamashita*, *Ikehara*, and *Miyazaki*. Applicants therefore request that the rejection of claims 31-35, 38-46, 49, 51, 54, 58, 59, and 63-66 under 35 U.S.C. § 103(a) be withdrawn.

II. NEW CLAIMS

New claims 67 and 68, support for which may be found, for example, in Applicants' specification on page 20, lines 27-31, depend from independent claim 31 and are allowable at least for the same reasons independent claim 31 is allowable. In

addition, each of the dependent claims recites unique combinations that are neither taught nor suggested by the cited art, and therefore each also is separately patentable.

Accordingly, claims 67 and 68 are in condition for allowance.

III. CONCLUSION

Applicants respectfully submit that claims 31-65, 67, and 68 are in condition for allowance.

The Office Action contains characterizations of the claims and the related art with which Applicants do not necessarily agree. Unless expressly noted otherwise, Applicants decline to subscribe to any statement or characterization in the Office Action.

In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration and reexamination of this application and the timely allowance of the pending claims.

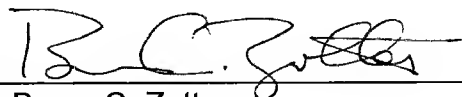
Please grant any extensions of time required to enter this response and charge any additional required fees to our Deposit Account 06-0916.

Respectfully submitted,

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Dated: August 27, 2009

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